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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,223	01/04/2007	Susumu Yamaguchi	4600-0121PUS1	8401

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EXAMINER

MUKHOPADHYAY, BHASKAR

ART UNIT	PAPER NUMBER
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1787

NOTIFICATION DATE	DELIVERY MODE
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06/03/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/578,223	Applicant(s) YAMAGUCHI ET AL.	
	Examiner BHASKAR MUKHOPADHYAY	Art Unit 1787	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: ____. |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :1/22/2010;12/5/2008;11/13/2008;6/4/2008;9/18/2007;9/18/2007;9/19/2006;5/4/2006.

DETAILED ACTION

Claim Objections

1. Claims 10-13 objected to because of the following informalities: Claims 10-13, recite "A method". Thus claims 10-13 lack proper antecedent basis and should be changed to "The method". Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 1 recites the phrase "making taste of seasoning better" It is not clear how is the taste better or as compared to what substance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2, 3, 4, 7, 8, 9, and 13, are rejected under 35 U.S.C. 102(b) as being anticipated by Higashiyama et al., USPN 6117905, in view of the evidence given by Gilbertson, USPN 6,166,076.

5. Regarding claims 2, 3, 4, 7, 8, and 9, Higashiyama et al., disclose the use of arachidonic acid in foods like soup (col 6, line 38), meat (col 6 line 36), fried rice (col 8, line 40), mayonnaise (col 6, line 42), and processed soy curd (col 6, line 49) to meet the claimed elements in claims 2, 3, 4, 7, 8, and 9. It is also anticipated that the taste is enhanced to processed food products like meat, fish etc. which are the extracts. It is clear that the soy curd is a vegetable protein. It is also clear that mayonnaise is the egg food and thus meets claim 3. Evidence prior art by Gilbertson teaches about arachidonic acid stimulate taste receptor cells and enhance taste in the food additives (col 2, lines 55-60, col 5, Table 1) so that the taste of food is enhanced and sensed through neuro epithelial cells as chemoreceptors in the mouth (col 1, lines 10-15). It is well anticipated that this inherent phenomena is known as “body taste enhancement”. of Given that Higashiyama disclose adding long chain highly unsaturated fatty acid as

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presently claimed to processed egg food, fried rice, and vegetable protein as presently claimed, it is clear that such additions would inherently enhance the egg flavor, enhance the fried egg flavor, and inhibit proteinous odor, respectively.

6. Regarding claim 13, Higashiyama et al., teach about production of arachidonic acid from microorganism and used in various food compositions (Abstract). The motivation is to produce arachidonic acid from microorganisms because of inconvenience to produce from animal kingdoms (col 1, lines 57-60) and production from microorganisms with little unsaponifiable matters and the smallest possible amount of sterol with cyclopropane structure , being suitable for production of foods (col 2, lines 20-30).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1,148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- a. Determining the scope and contents of the prior art.
- b. Ascertaining the differences between the prior art and the claims at issue.
- c. Resolving the level of ordinary skill in the pertinent art.
- d. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1, 2, 4, 5, 6 7, 9, 10, 11, 12, are rejected under 35 U.S.C. 102(b) as being unpatentable over Chen (EP 0 295 509) in view of Gilbertson, USPN 6, 166,076.

10. Regarding claims 1, 2, 4, 5, 7, 10, 11, and 12, Chen discloses the addition of long chain unsaturated fatty acids in the flavoring composition as seasoning composition (page 2, line 1) wherein the long chain unsaturated fatty acids are obtained from safflower, linseed oil etc. (pg 2, lines 15-25), when subjected to oxidation produce flavoring composition (pg 2, lines 5-10, e.g.' individual fatty acids or mixtures when subjected in the presence of oxygen') and flavors can be obtained which can be like meat, chicken, fish etc.(pg 3, line 10) and specific flavors e.g. meats, sauces, soup etc. (pg 3, lines 32-35) depending on the type of starting fatty acid material and temperature (pg 3, lines 9-13; and lines 30-35) e.g. 'oleic acid or a mixture of fatty acids containing oleic acid have a strong beef-like and linoleic acid have

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a strong roasted chicken like flavor (pg 2, lines 37-42). It is obvious that flavors can be made in the products like meats, chicken, fish etc. (page 3, line 10) and they are the extracts from them. It is also obvious that "curry roux" or Stew as claimed in claim 5, is a type of soup and one of ordinary skill in the art will enhance its taste using flavoring agents including fatty acids in the composition.

Chen, however, does not teach specific long chain highly unsaturated fatty acids e.g. arachidonic acid as taste enhancing food additives.

Gilbertson teaches about a method for making various foods with cis polyunsaturated fatty acids, known as PUFAs (col 7, line 43, e.g. cis poly unsaturated fatty acids or PUFAs) to stimulate taste receptors in the mouth (col 9, lines 10-15). Gilbertson also teaches about fatty acids exhibiting these properties are those having at least two double bonds, at least one of which in cis confirmation and polyunsaturated fatty acids including arachidonic acid, eicosapentaenoic acid, and docosahexaenoic acid (Abstract; Table 1) and the time for taste receptor cells to return to the "resting" state is longer following fatty acid stimulation than for other taste stimuli and so increases the taste receptor cells sensitivity to other stimuli (Abstract) , and thus meeting the claimed element "making taste of seasoning better".

Gilbertson also teaches that the mechanism hold good to enhance the taste of various foods (col 9, lines 11-13). The motivation is to include long chain highly unsaturated fatty acids e.g. arachidonic acid to stimulate taste receptor cells (TRCs) on the tongue by cis-polyunsaturated acids in the mouth (col 2, lines 55-60) so that

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the taste of food is enhanced and sensed through neuro epithelial cells as chemoreceptors in the mouth (col 1, lines 10-15). It is obvious that this phenomena is known as "body taste enhancement".

It would have been obvious to one of ordinary skill in the art at the time of invention to include the teaching of Gilbertson into Chen. One of ordinary skill in the art would have been motivated to include long chain highly unsaturated fatty acids e.g. arachidonic acid to stimulate taste receptor cells (TRCs) on the tongue by cis-polyunsaturated acids in the mouth so that the taste of food is enhanced and sensed through neuro epithelial cells as chemoreceptors in the mouth. It is obvious that this phenomenon is known as "body taste enhancement".

12. Regarding claims 6, and 9, Chen in view of Gilbertson teach about the flavoring composition with e.g. treated oleic acid, if added, to any plant protein, has excellent roast beef dripping character and if treated with linoleic acid instead, it will have roasted chicken or fish character (page 4, examples 1, and 2; and pg 2, lines 40-41 e.g. roasted chicken or fish). Thus "inhibiting proteinous odor" as claimed in claim 9. Further, a mechanism will hold well if one of ordinary skill in the art adds the acid of Chen in view of Gilbertson to any soup including Japanese soup, to impart respective beef dripping roasted chicken or fish (pg 2, lines 40-41) character, or any other soup flavor, which would obviously suppress the unwanted off flavor of heat browning odor in the product as claimed in claim 6.

Conclusion

13. Any inquiry concerning the communication or earlier communications from the examiner should be directed to Bhaskar Mukhopadhyay whose telephone number is (571)-270-1139.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)-272- 1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B.M. /
Patent Examiner, Art Unit 1787

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1787

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